

**WHAT IS CLAIMED IS:**

1. A presence and recognition system for a motor vehicle including an engine, said presence and recognition system comprising:

an electronic lock including first communication means being so configured as to periodically transmit a question signal and to generate an output signal when predetermined conditions have been met; and

an electronic key including second communication means being so configured as to (a) receive the question signal, (b) modify the question signal according to a predetermined pattern to yield a response signal, (c) transmit the response signal to said first communication means;

wherein said output signal is required for continuous operation of the engine of the motor vehicle.

2. A presence and recognition system as recited in claim 1, wherein said predetermined conditions include a positive match between a response signal received by said first communication means and an expected response signal.

3. A presence and recognition system as recited in claim 1, wherein said first communication means include an interrogator circuit and an antenna.

4. A presence and recognition system as recited in claim 3, wherein said antenna is a coil antenna.

5. A presence and recognition system as recited in claim 1, wherein said second communication means include a transponder circuit and an antenna.

6. A presence and recognition system as recited in claim 5, wherein said antenna is a coil antenna.

7. A presence and recognition system as recited in claim 5, wherein the response signal is generated by said transponder circuit by modifying the question signal.

8. A presence and recognition system as recited in claim 1, wherein (a) said electronic lock further includes a lock housing having with a cylindrical portion provided with an external rib, (b) said electronic key assembly further includes a key housing made of a slightly resilient material and having a cylindrical aperture provided with an internal rib, said cylindrical aperture being sized to be removably mountable to said cylindrical portion of said lock housing, said internal and external ribs providing a resilient lock between the key housing and the lock housing.

9. A presence and recognition system as recited in claim 1, wherein said periodic transmission of a question signal by said electronic lock occurs about every 0.2 second.

10. A presence and recognition system for a motor vehicle including an engine, said presence and recognition system comprising:

an electronic lock including an interrogator circuit so configured as to periodically transmit a question signal and to generate an output signal when predetermined conditions are met; and

an electronic key including a transponder circuit so configured as to receive the question signal from the interrogator circuit, modify the question signal according to a predetermined pattern to yield a response signal, transmit the response signal to said interrogator circuit;

wherein said output signal is required for continuous operation of the engine of the motor vehicle.

11. A presence and recognition system as recited in claim 10, wherein said predetermined conditions include a positive match between a

response signal received by said first communication means and an expected response signal.

12. A presence and recognition system as recited in claim 11, wherein said periodic transmission of a question signal by said electronic lock occurs about every 0.2 second.

13. A presence and recognition system for a motor vehicle including an engine, said presence and recognition system comprising:

an electronic lock including an interrogator circuit so configured as to periodically transmit a question signal; and

an electronic key including a transponder circuit so configured as to receive the question signal from the interrogator circuit, modify the question signal according to a predetermined pattern to yield a response signal, transmit the response signal to said interrogator circuit;

wherein a) said interrogator circuit compares said response signal with an expected response signal and generates an output signal to the engine when said response signal corresponds to said expected response signal, and b) failure to periodically receive the output signal causes the engine to stop.

14. A presence and recognition system as recited in claim 13, wherein said periodic transmission of a question signal by said electronic lock occurs about every 0.2 second.

15. A presence and recognition method for a motor vehicle including an engine, said presence and recognition method comprising the acts of:

providing an electronic lock including first communication means;

providing an electronic key including second communication means;

transmitting, via the first communication means, a question signal;

receiving, via the second communication means, the question signal;

in the electronic key, modifying the question signal according to a predetermined pattern to yield a response signal;

transmitting, via the second communication means, the response signal;

in the electronic lock, receiving the response signal and comparing it with an expected response signal; and

generating an output signal to the engine when predetermined conditions have been met;

wherein said output signal is required for continuous operation of the engine of the motor vehicle.